

DATE: April 5, 2002

TO: Region Engineers
Region Associate Delivery Engineers
Region Construction Engineers
Resident/Project Engineers/TSC Managers
Region Traffic Engineers

FROM: Larry E. Tibbits
Chief Operations Officer

Gary D. Taylor
Chief Engineer/Deputy Director
Bureau of Highway Technical Services

SUBJECT: Bureau of Highway Instructional Memorandum 2002-05
Documenting Certified Construction Materials Using FieldManager and FieldBook

This instructional memorandum sets forth changes to the material documentation methods for certified materials at the project level using FieldManager and FieldBook. These changes apply to all federal and state funded highway construction projects.

The method of verifying and documenting material when the basis of acceptance is “test” or “tested stock” is not affected by this revised process. Moreover, the requirements for documenting aggregate, bituminous, and concrete delivery tickets are also not affected.

This memorandum can apply to active projects as well as projects yet to be audited, if reasonable assurance can be made that the certified material used with the pay items is as specified on the certification document.

Changes to FieldManager required for handling this new process have been identified and the FieldManager team will determine the time frame for accomplishing these changes. Until FieldManager can be revised, a method for using the existing FieldManager application has been worked out with the FieldManager team. Training will be available.

Process for Documenting Certified Materials in FieldManager

- When all the components making up a pay item are certified from the same source, each component of the pay item is not required to be listed and associated in FieldManager and FieldBook. The relationship of the material to the pay item will be one to one whenever this is the case. Example: If Guardrail Type B is the pay item, Guardrail Type B would also be the material associated with it and would include the steel beams, posts, hardware, etc.
- When additional material components are certified from other sources, these components will be associated to the pay item and only the **sources** will be verified and documented. The

quantity approved of each of these certified material components will no longer need to be documented in FieldManager and FieldBook.

- Using the above guardrail example, if the wood products are certified from a different source than the steel products, the wood products would be associated with the pay item Guardrail Type B and the source certifying the wood products would be identified. The assumption is then made that if the guardrail was completed according to the plans, then the proper quantities of all associated components were supplied.
- This in no way relieves the engineer from verifying in the field that material quantities used are as specified by MDOT plans and procedures. This verification should be documented accordingly by means of IDR or other project documentation.

Changes to the Quality Assurance Procedures Manual

- I. The following terminology will apply when referring to materials accepted by certification. The Materials Quality Assurance Procedures Manual will be revised at the next printing to reflect the these changes:
 - A. The terminology of Section C1 - **General Materials Certification Procedures** - revise as follows:
 1. **Approved Manufacturer** refers to a manufacturer who has submitted quality control documentation and/or material samples for evaluation, and who has been given status in accordance with Section 8 to **certify specific** materials.
 2. **Approved Supplier** refers to a supplier who has been given approved status in accordance with Section 9 to **supply and certify specific** materials that are manufactured by the approved manufacturer. This replaces the old approved re-certifier terminology.
 - B. There will be the following three types of certifications:
 1. **General Certification** - refers to the old Type D certification.
 2. **Test Data Certification** - refers to the old Type A certification.
 3. **Approved Manufacturer/Supplier** - refers to the old approved certifier and re-certifier.
- II. **Table G - Material Acceptance Requirements** - revise to reflect the changes in the terminology of Section C1.
- III. **Section A1 - Scope and Objectives of the Quality Assurance Program** - revise to reflect the changes in the terminology of Section C1.
- IV. **Section A6 - Procedures for processing Testing Order Form 501** - revise to reflect the following changes:

- A. The contractor is directed to send or deliver the completed testing order to the project engineer before or at the preconstruction meeting, or upon award of contract. The testing order will list which materials will require testing. It will also list the approximate quantities and sources of material used on the project, and identify all materials that will be supplied by approved manufacturer/supplier.
- B. The contractor must sign the testing order certifying that “all materials supplied to this project and listed on this testing order are from the sources specified.”
 - 1. If the source of material changes, the contractor must provide a revised testing order to the project engineer.
 - 2. If subcontractors are specified on the testing order submitted by the prime contractor, the subcontractor will then submit a separate testing order for the materials they will be supplying to the project. The prime contractor will be held responsible for the testing and testing orders of their subcontractor.
 - 3. Payment to the contractor will be withheld for items that **do not** have a completed and acceptable testing order for the materials.
 - 4. The project engineer is responsible for assurance that all materials meet acceptance requirements.
- C. The materials staff in the region may assist the engineer in determining the following:
 - 1. Which items originate locally. Acceptance instructions will be referenced in the last column.
 - 2. Which items originating elsewhere will be sampled or inspected on the project.
 - 3. Which items are to be supplied by sources with certification, QPL or tested stock privileges, as listed in the current Materials Source Guide.
- D. **Testing Order Form 501** - revise to include the following signed statement from the contractor, “I certify that all materials supplied to this project and listed on this testing order are from the sources specified”. Revise the testing order from one form for all types of materials to one form for each specific type of operation, as indicated below:
 - 1. Form **501A** - Materials for **A**ggregate Items
 - 2. Form **501B** - Materials for **B**ituminous Items
 - 3. Form **501C** - Materials for **C**oncrete Items
 - 4. Form **501D** - Materials for **D**rainage Items
 - 5. Form **501F/G** - Materials for **F**ence & **G**uardrail Items
 - 6. Form **501H** - Materials for **H**ighway Signs

7. Form **501E** - Every Other Material that does not fall into one of the other categories.

Procedural Changes in the Project Office

- Additional emphasis will be placed on the testing order and the sources listed there by the contractor. The project engineer will follow Section A-6 of the Quality Assurance Manual - **Procedures for processing Testing Order Form 501**.
- The revised testing order forms will be the only form accepted by the project engineer. They include a signed certification statement from the contractor that "the materials listed on the testing order are from the sources specified." Copies are attached and are also available on MDOT's forms page.
- The project engineer will check the material delivered to the project against the testing order and/or FieldBook associations.
- When the basis of acceptance is "**general certification**" or "**test data certification**," the project engineer will verify that a certification has been sent to the project and document the source in FieldManager.
- When the basis of acceptance is "**certification from an approved manufacturer/supplier**," the project engineer will verify that the source is listed in the Materials Source Guide and document the fact in FieldManager. If the sources on the certification document provided to the project office do not agree with the testing order submitted by the contractor, the engineer will require a revised testing order.

Chief Operations Officer

Chief Engineer/Deputy Director
Bureau of Highway Technical Services

BOHTS:C/T:AW:kab

Attachments

Subject Index: Documentation

cc: C & T Division Staff
Real Estate, M. Frierson
Design Div., P. Miller
Maintenance Div., C. Roberts
T & S Div, J. O'Doherty
C & T Division, J. Culp
OEO - S. El Ahmad
J. Klee
C. Rademacher
V. Blaxton
B. Jay

K. Trentham
MRBA
MAPA
MCPA
MCA
MAA
AUC
CRAM
MRPA
ACEC
MPA

Information required by Act 17 of 1925 to report materials to be tested.

Instructions: In order to avoid delays, Testing Orders should be returned to the Project Engineer as soon as possible.

No Test on materials can be conducted until forms are received

Distribution: (3copies) ; 1)Project Engineer, 2) Region Materials, 3) Lansing C&T, Materials Control.

CONTROL SECTION

PROJECT ENGINEER (Please Print)

CONTRACTOR (Please Print)

JOB NO.

PROJECT LOCATION:(Please Print)

[illegible]

I certify that all materials supplied to this project are from the sources as referenced above, and when the basis of acceptance is other than test, have been supplied by approved manufacturers/suppliers.

CONTRACTOR SIGNATURE

PRINT NAME _____

PHONE NO.

DATE _____

DATE _____

TESTING ORDER - CONCRETE

FILE 300

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Distribution: (3copies) ; 1)Project Engineer, 2) Region Materials, 3) Lansing C&T, Materials Control.

CONTROL SECTION

PROJECT ENGINEER (Please Print)

CONTRACTOR (Please Print)

JOB NO.

PROJECT LOCATION:(Please Print)

FOR OFFICE USE

| MATERIAL | TYPE / SIZE | APPROXIMATE QUANTITY | SOURCE OF MATERIAL (Complete name & address where item will be available for testing) | TEST | OTHER | |
|---------------------------|-------------|----------------------|------------------------------------------------------------------------------------------|------|-------|--|
| TRANSIT MIX CONCRETE | | | | | | |
| | | | | | | |
| | | | | | | |
| COARSE AGG. | | | | | | |
| | | | | | | |
| FINE AGG. | | | | | | |
| | | | | | | |
| ADMIXTURES | | | | | | |
| | | | | | | |
| CURING COMPOUND | | | | | | |
| | | | | | | |
| FLY ASH | | | | | | |
| | | | | | | |
| DOWEL BARS | | | | | | |
| | | | | | | |
| LOAD TRANSFERS ASSEMBLIES | | | | | | |
| | | | | | | |
| BAR REINFORCEMENT | | | | | | |
| | | | | | | |
| JOINT FILLER | | | | | | |
| | | | | | | |
| JOINT SEALER | | | | | | |
| LANE TIES | | | | | | |
| | | | | | | |

I certify that all materials supplied to this project are from the sources as referenced above, and when the basis of acceptance is other than test, have been supplied by approved manufacturers/suppliers.

CONTRACTOR SIGNATURE

PRINT NAME

PHONE NO.

DATE

TESTING ORDER - DRAINAGE

FILE 300

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CONTROL SECTION

PROJECT ENGINEER (Please Print)

CONTRACTOR (Please Print)

JOB NO.

PROJECT LOCATION (Please Print)

FOR OFFICE USE

| MATERIAL | TYPE / SIZE | APPROXIMATE QUANTITY | SOURCE OF MATERIAL (Complete name & address where item will be available for testing) | TEST | OTHER | |
|---------------------------------------------------|-------------|----------------------|------------------------------------------------------------------------------------------|------|-------|--|
| REINFORCED CONCRETE PIPE (600mm (24") or less) | | | | | | |
| | | | | | | |
| REINFORCED CONCRETE PIPE (> than 600mm (24") | | | | | | |
| | | | | | | |
| CORRUGATED POLY.- PIPE | | | | | | |
| CORRUGATED METAL PIPE | | | | | | |
| | | | | | | |
| | | | | | | |
| UNDERDRAINS | | | | | | |
| | | | | | | |
| | | | | | | |
| DRAINAGE STRUCTURES | | | | | | |
| DRAINAGE STRUCTURE COVERS | | | | | | |
| BRICK/BLOCK | | | | | | |
| BACKFILL | | | | | | |
| | | | | | | |
| PIPE JOINT GASKET MATERIAL | | | | | | |
| GEOTEXTILES | | | | | | |
| | | | | | | |
| | | | | | | |
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I certify that all materials supplied to this project are from the sources as referenced above, and when the basis of acceptance is other than test, have been supplied by approved manufacturers/suppliers.

CONTRACTOR SIGNATURE

PRINT NAME

PHONE NO.

DATE

TESTING ORDER / Misc. (Everything Else)

FILE 300

INSTRUCTIONS: In order to avoid delays, testing orders (3 copies) should be returned to the Project Engineer as soon as possible. No tests on materials can be conducted until forms are received.
DISTRIBUTION: (3 copies) 1. Project Engineer, 2. Region Materials, 3. Lansing C&T, Materials Control

CONTROL SECTION

PROJECT ENGINEER (Please Print)

CONTRACTOR (Please Print)

JOB NO.

PROJECT LOCATION (Please Print)

FOR OFFICE USE

| MATERIAL | TYPE/SIZE | APPROXIMATE QUANTITY | SOURCE OF MATERIAL (Complete name & address where item will be available for testing) | TEST | OTHER | |
|-----------------------|-----------|----------------------|------------------------------------------------------------------------------------------|------|-------|--|
| STRUCTURAL | | | | | | |
| | | | | | | |
| EXPANSION ANCHORS | | | | | | |
| | | | | | | |
| PILING | | | | | | |
| | | | | | | |
| WATERPROOFING | | | | | | |
| | | | | | | |
| REINFORCING STEEL | | | | | | |
| | | | | | | |
| | | | | | | |
| TRAFFIC CONTROL | | | | | | |
| | | | | | | |
| | | | | | | |
| PAVEMENT MARKING | | | | | | |
| | | | | | | |
| | | | | | | |
| RESTORATION | | | | | | |
| | | | | | | |
| | | | | | | |
| ELECTRICAL | | | | | | |
| | | | | | | |
| SILT FENCE | | | | | | |
| | | | | | | |
| TREATED WOOD & LUMBER | | | | | | |

I certify that all materials supplied to this project are from the sources as referenced above, and when the basis of acceptance is other than test, have been supplied by approved manufacturers/suppliers.

| | | | |
|-----------------------|------------|-----------|------|
| CONTRACTORS SIGNATURE | PRINT NAME | PHONE NO. | DATE |
|-----------------------|------------|-----------|------|

TESTING ORDER - Fencing & Guardrail

FILE 300

INSTRUCTIONS: In order to avoid delays, testing orders (3 copies) should be returned to the Project Engineer as soon as possible. No tests on materials can be conducted until forms are received.

DISTRIBUTION : (3 COPIES) 1. Project Engineer, 2. Region Materials, 3. C&T Materials Control

CONTROL SECTION

PROJECT ENGINEER (Please Print)

CONTRACTOR (Please Print)

JOB NO.

PROJECT LOCATION (Please Print)

FOR OFFICE USE

| MATERIAL | SIZE/TYPE | APPROXIMATE QUANTITY | SOURCE OF MATERIAL (Complete name & address where item will be available for testing) | TEST | OTHER | |
|--------------------------------|-----------|----------------------|---------------------------------------------------------------------------------------------|------|-------|--|
| STEEL BEAM GUARDRAIL | | | | | | |
| | | | | | | |
| GUARDRAIL APPROACH TERMINAL | | | | | | |
| | | | | | | |
| WOOD POSTS & BLOCKS | | | | | | |
| | | | | | | |
| TUBING, STEEL RAILING | | | | | | |
| | | | | | | |
| | | | | | | |
| FENCING FABRIC | | | | | | |
| | | | | | | |
| PEDESTRIAN FENCING | | | | | | |
| | | | | | | |
| FENCE POSTS | | | | | | |
| | | | | | | |
| FENCE RAILS | | | | | | |
| | | | | | | |
| HIGH TENSILE WIRE FENCE | | | | | | |
| | | | | | | |
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DATE _____